

Date: Thursday, 6/14/2007 10:28:38 AM
 User: Eric Charbonneau

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services
 Job Number : 32910
 Estimate Number : 12898
 P.O. Number :
 This Issue : 6/14/2007 S.O. No. :
 Prsht Rev. : NC
 First Issue : 1/1 Type : LANDING GEAR
 Previous Run :
 Written By : E 07.06.14
 Checked & Approved By :
 Comment : Est Rev:A 07.06.11 New Issue EC

Drawing Name : BK117 SKIDTUBE ASSEMBLY
 Part Number : D117762041 A 08.07.10
 Drawing Number : D3582 REV UR
 Project Number : LG0005 **FOR ENGINEERING USE ONLY**
 Drawing Revision : UR A
 Material :
 Due Date : 6/22/2007 Qty: 2 Um: Each

Additional Product

Job Number:



Seq. #: Machine Or Operator

1.0 DC



Comment: DOCUMENT C
 Photocopy bl

2.0 D2962150



Comment: Qty.: 1.00

Pick:

Qty Part Number

1. D2962-150



Remove

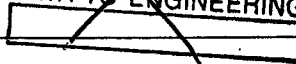
(2) D2965

エアロファシリティ株式会社
 Tel 03-5574-7655

Extrusion

B28612

PROTOTYPE
 PLEASE RETURN ALL ISSUED
 DATA TO ENGINEERING



08.07.10

01 Not Read 07.07.02

CIFICATE OF CONFORMITY
 REQUIRED

7-6-19

(3)

3.0 LANDING GEAR 1



LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Determine square end of tube and deburr

2-Drill #30 pilot holes using DT8678. Do not open holes.

3-Deburr holes.

NIA DP
 7-6-19

4.0 BENDING



BENDING MACHINE



Comment: BENDING MACHINE

Bend tube as per program D3582 on CNC Bender and Dwg D3582. Use 5/16" locator pin on buggy "A".

DP
 7-6-19

CELESTIAL

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Drawing Name: BK117 SKIDTUBE ASSEMBLY

Job Number: 32910

Part Number: D117762041

Job Number:



Seq. #: Machine Or Operation: Description:

5.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Cut Fwd end of the tube using DT8185

2-Cut Aft end at VC using DT8185

3-Deburr ends

4-Drill Aft Cap holes using DT8678 ***DO NOT OPEN AFT CAP HOLE***

5-Locate DT & Drill Ground wire hole on top of Tube.

6-Install 3/16 cleco in Ground wire hole, then drill all X-Bolt holes using 3/16" drill.

7-Drill pilot holes for wearplates using DT

8-Open wearplate holes and ground wire holes to Ø19/64" (0.297") as per Dwg D3582.

9-Open Aft Cap holes using 209" drill.

10-Deburr holes.

DP 7-6-19

DP 7-6-19

N/A

DP 7-6-19

DP 7-6-21

6.0

D2964

Cap



Comment: Qty.: 1.0000 Each(s)/Unit Total: 2.0000 Each(s)

Cap

Batch: B14101

BE 07-06-21

CERTIFICATE OF CONFORMITY
REQUIRED

7.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Weld fwd cap D2964 per dwg D3582 and QSI/004

A/R AL ROD

Batch: M104305/M102421/M104221 BE 07-06-21

2-Grind flush

BE 07-06-21

8.0

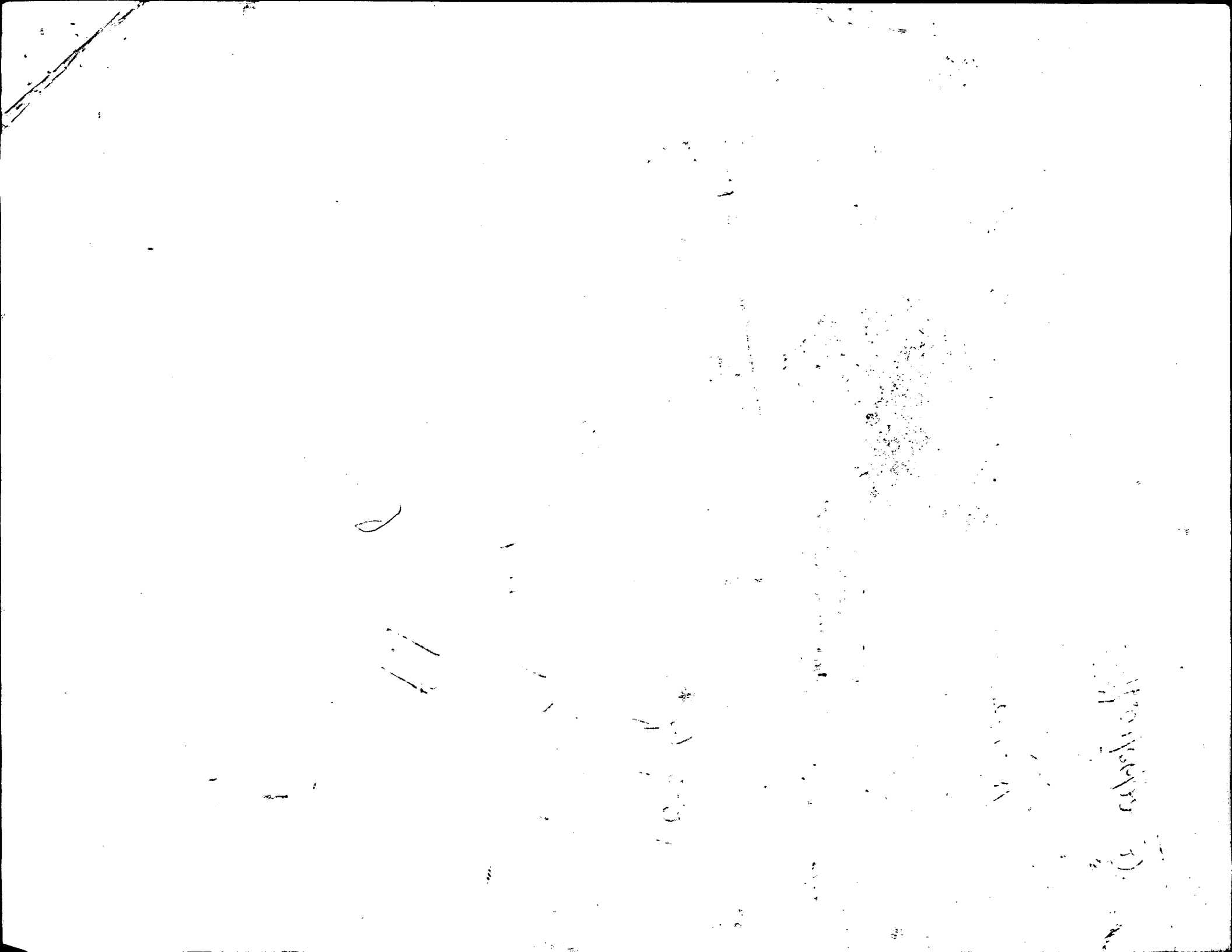
QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

12/07/06/22 (2)



Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BK117 SKIDTUBE ASSEMBLY

Job Number: 32910

Part Number: D117762041

Job Number:



Seq. #:

Machine Or Operation:

Description :

9.0

QC5

INSPECT WORK TO CURRENT STEP

**ENGINEERING
APPROVAL**



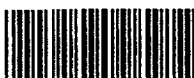
Comment: INSPECT WORK TO CURRENT STEP

PH 07-06-22

10.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

DP 7-6-22 (2)

11.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

DP 7-6-22 (2)

12.0

D2973

Cross Bolt Spacer



Comment: Qty.: 2.0000 Each(s)/Unit Total : 4.0000 Each(s)

Cross Bolt Spacer

Batch: *B14636*

BE 07-06-25

**CERTIFICATE OF CONFORMITY
REQUIRED**

13.0

D35841

WEB



Comment: Qty.: 1.0000 Each(s)/Unit Total : 2.0000 Each(s)

WEB

batch: *B32911*

**CERTIFICATE OF CONFORMITY
REQUIRED**

14.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Open X-Bolt holes to .750"(4Places) as per Dwg D3582, section B-B

2-Counter Sink X-BOLT holes as per Dwg D3582

3-Deburr and blow out chips from inside of tube.

4-Bond web as per Dwg D3582 & QSI 015

A/R 241 Sike Flex Batch: *M103561 / M104732*

Exp Date: *2-10-1 / 8-1-1*

5-Weld x-bolt spacers(D2973) as per Dwg D3582 section B-B.

A/R AL ROD

Batch: *M104305 BE 07-06-25*

6-Grind welds flush

DP 7-6-22
7-6-22
(2)

Date: Thursday, 6/14/2007 10:28:39 AM
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Drawing Name: BK117 SKIDTUBE ASSEMBLY

Job Number: 32910

Part Number: D117762041

Job Number:



Seq. #:

Machine Or Operation:

Description:

Tools: E

15.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

07/06/25

2

16.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

07-06-25

2

17.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

BR/M 07-06-25

2

18.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

FL

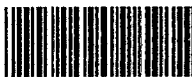
07/06/25

2

19.0

ALS71032130

Insert



Comment: Qty.: 38.0000 Each(s)/Unit Total: 76.0000 Each(s)

Insert

Batch: M103495

20.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Install Wearplate & Ground Wire inserts as per Dwg D3582.

FL/D 07/06/25

2

21.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

Inspect Inserts

07-06-25

This step not necessary

22.0

D2965

Cap



Comment: Qty.: 1.0000 Each(s)/Unit Total: 2.0000 Each(s)

Cap

Batch: B28959 AE 07-06-25

CERTIFICATE OF CONFORMITY
REQUIRED

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BK117 SKIDTUBE ASSEMBLY

Job Number: 32910

Part Number: D117762041

Job Number:



Seq. #:

Machine Or Operation:

Description :

23.0

D35083

WEARPLATE



Comment: Qty.: 1.0000 Each(s)/Unit Total : 2.0000 Each(s)
WEARPLATE
Batch: ~~B33016~~ B33020

CERTIFICATE OF CONFORMITY
REQUIRED

24.0

D35089

WEARPLATE



Comment: Qty.: 1.0000 Each(s)/Unit Total : 2.0000 Each(s)
WEARPLATE
Batch: B33013

CERTIFICATE OF CONFORMITY
REQUIRED

25.0

D350811

WEARPLATE



Comment: Qty.: 1.0000 Each(s)/Unit Total : 2.0000 Each(s)
WEARPLATE
Batch: B33011

CERTIFICATE OF CONFORMITY
REQUIRED

26.0

D350813

WEARPLATE



Comment: Qty.: 1.0000 Each(s)/Unit Total : 2.0000 Each(s)
WEARPLATE
Batch: B33012

CERTIFICATE OF CONFORMITY
REQUIRED

27.0

D35583

GASKET



Comment: Qty.: 1.0000 Each(s)/Unit Total : 2.0000 Each(s)
GASKET
Batch: B33021

CERTIFICATE OF CONFORMITY
REQUIRED

28.0

D35589

GASKET



Comment: Qty.: 1.0000 Each(s)/Unit Total : 2.0000 Each(s)
GASKET
Batch: B33016

CERTIFICATE OF CONFORMITY
REQUIRED

29.0

D355811

GASKET



Comment: Qty.: 1.0000 Each(s)/Unit Total : 2.0000 Each(s)
GASKET
Batch: B33014

CERTIFICATE OF CONFORMITY
REQUIRED

FL 07/06/25

(2)

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BK117 SKIDTUBE ASSEMBLY

Job Number: 32910

Part Number: D117762041

Job Number:



Seq. #:

Machine Or Operation:

Description:

30.0

D355813

GASKET



Comment: Qty.: 1.0000 Each(s)/Unit Total: 2.0000 Each(s)
GASKET
Batch: B33015

CERTIFICATE OF CONFORMITY
REQUIRED

31.0

AN3C4A

BOLT



Comment: Qty.: 30.0000 Each(s)/Unit Total: 60.0000 Each(s)
BOLT
Batch: m103641

32.0

AN3C5A

Bolt



Comment: Qty.: 2.0000 Each(s)/Unit Total: 4.0000 Each(s)
Bolt
Batch: m104118

33.0

AN960C10L

washer



Comment: Qty.: 32.0000 Each(s)/Unit Total: 64.0000 Each(s)
washer
Batch: m102473

FL

07/06/25 (2)

34.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

1-Inspect for Foreign objects

2-Install Aft cap as per Dwg D3582, Detail "C"

A/R 241 Sika Flex Batch: m104732

Exp Date: 07/10

3-Install Wearplates as per Dwg D3582 ,

Note: Install Bolt and washer on Ground Wire inserts on top of tube see section

D-D of dwg D3582

*****Do not install bolts where indicated on Dwg(Note #6)*****

A/R 241 Sika Flex Batch: m104732

Exp Date: 07/10

4- Wing Walk as per Dwg D3043 and QSI 005 4.4

m104733

FL 07/06/25 (2)

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Job Number: 32910

Part Number: D117762041

Job Number:



Seq. #:

Machine Or Operation:

Description :

35.0

QC5

INSPECT WORK TO CURRENT STEP



**ENGINEERING
APPROVAL**



Comment: INSPECT WORK TO CURRENT STEP

36.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D117-762-041

R

Location

PPD Res

FOR ENGINEERING USE ONLY

R 07.06.24

37.0

QC21

FINAL INSPECTION/W/O RELEASE



FOR ENGINEERING USE ONLY



Comment: FINAL INSPECTION/W/O RELEASE

R 07.07.09

Job Completion



PROTOTYPE
PLEASE RETURN ALL ISSUED
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U 5-8709

FOR FURTHER INFORMATION

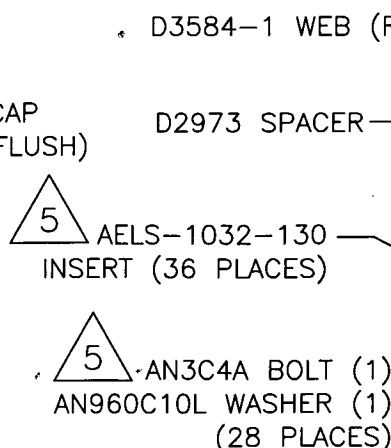
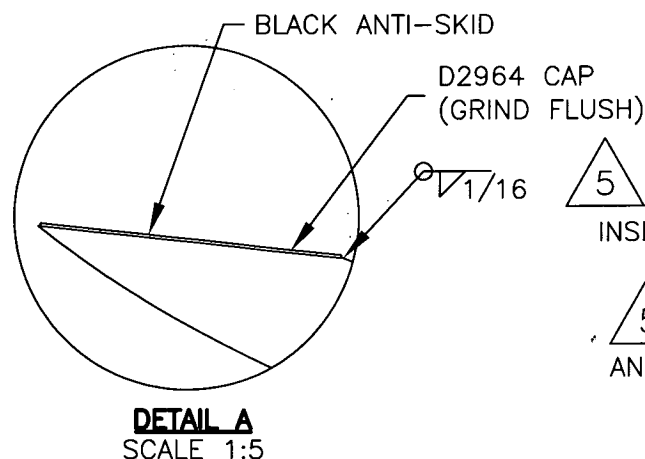
DO NOT REPRODUCE

DO NOT DRILL
PH 07.06.05

Qty	Part Number	Description
X	D3582-041	SKIDTUBE ASSEMBLY
1	D2962-150 ✓	EXTRUSION
1	D2964 ✓	CAP
1	D2965 ✓	CAP
2	D2973 ✓	CROSS BOLT SPACER
1	D3508-3 ✓	WEARPLATE
1	D3508-9 ✓	WEARPLATE
1	D3508-11 ✓	WEARPLATE
1	D3508-13 ✓	WEARPLATE
1	D3558-3 ✓	GASKET
1	D3558-9 ✓	GASKET
1	D3558-11 ✓	GASKET
1	D3558-13 ✓	GASKET
1	D3584-1 ✓	WEB
38	AELS-1032-130 ✓	INSERT
30	AN3C4A ✓	BOLT
2	AN3C5A ✓	BOLT
32	AN960C10L ✓	WASHER

GENERAL NOTES:

- 1) ALL DIMENSIONS ARE IN INCHES
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) WELDING TO BE DONE PER DART QSI 004.
- 4) INSERT D3584-1 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015 AFTER BENDING.
- 5) USE DART DRILL TEMPLATE DT8900 TO LOCATE AND DRILL $\varnothing 0.297$ HOLES (36 PLACES) FOR WEARSHOE INSERTS. INSTALL AELS-1032-130 PER SECTION B-B (36 PLACES) AFTER FINISH. SEAL WEARPLATE BOLTS WITH SIKAFLEX-241/-291.
- 6) DO NOT INSTALL AN3C4A BOLTS AND AN960C10L WASHERS IN INDICATED LOCATIONS.
- 7) FINISH:
CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIOR TO INSERTING D3584-1 WEB. POWDER COAT ASSEMBLY GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3. ANTI-SKID PAINT AS INDICATED TO 1.00 ABOVE CENTER LINE PER DART QSI 005 4.4 (OPTIONAL)

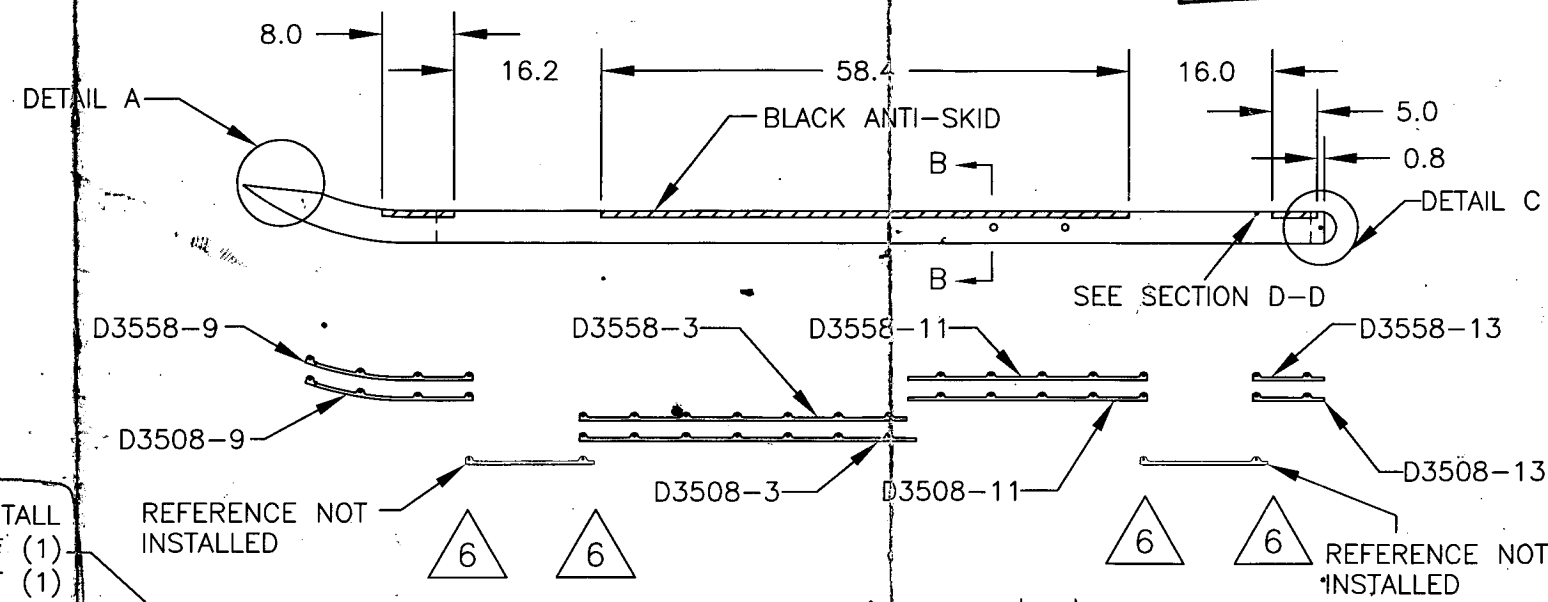
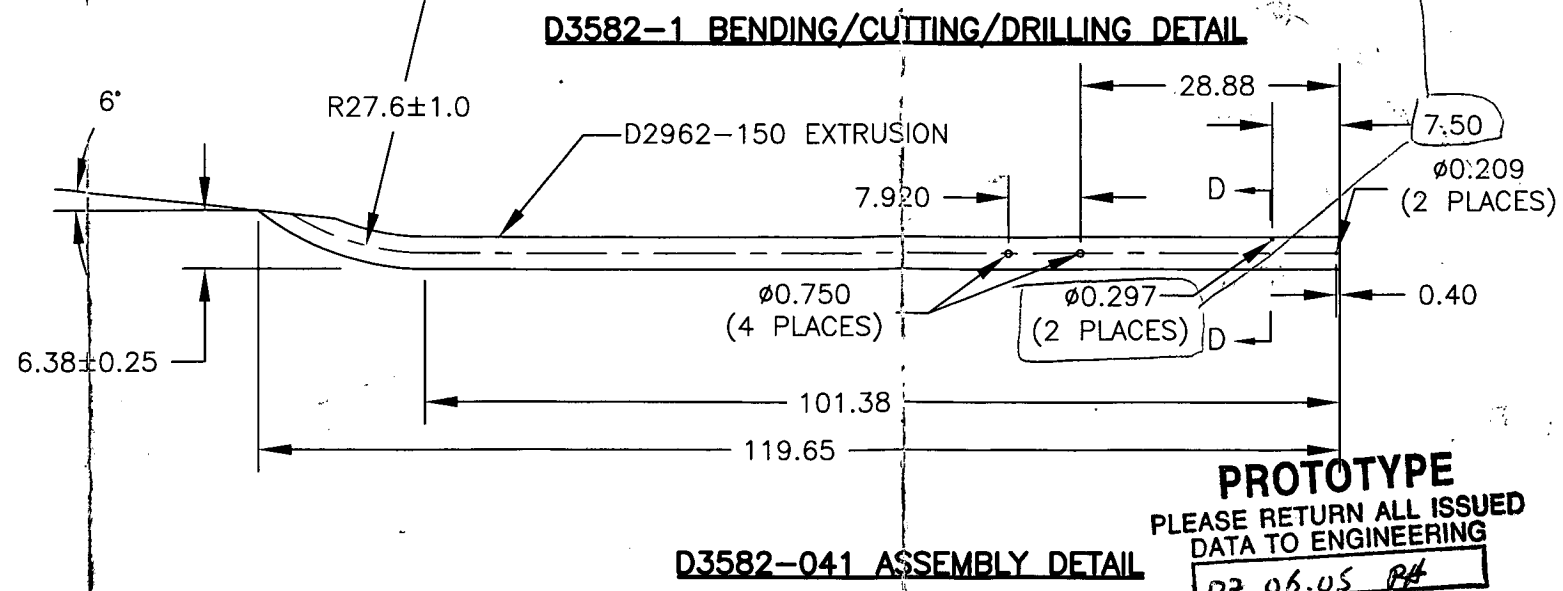
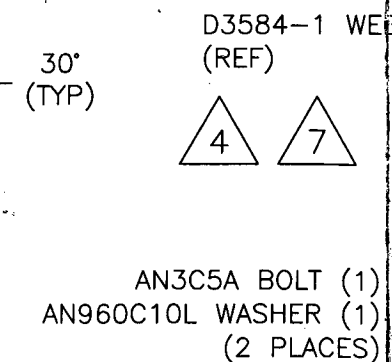
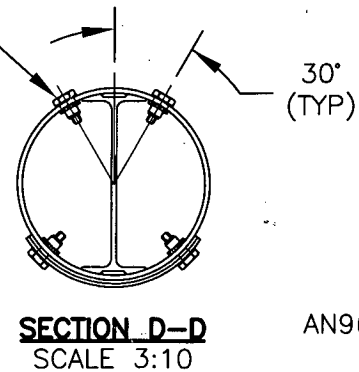


- AFTER BENDING AND DRILLING ASSEMBLY PERFORM THE FOLLOWING FOR $\varnothing 0.750$ HOLES ONLY:
1. CHAMFER HOLE $0.030 \times 45^\circ$
 2. INSERT D2973 SPACER (2 PLACES)
 3. WELD INTO PLACE AND GRIND FLUSH
 4. PASS $\varnothing 0.630$ DRILL TO REMOVE SPILL OVER

EST
Done
(017-762-041)
-011

DO NOT DRILL
PH 07.06.05

AFTER FINISH, INSTALL
AELS-1032-130 INSERT (1)
AN3C4A BOLT (1)
AN960C10L WASHER (1)
(2 PLACES)



PROTOTYPE
PLEASE RETURN ALL ISSUED
DATA TO ENGINEERING
07.06.05 PH

A		07.04.20	NEW ISSUE
DESIGN	DRAWN BY	DART DART AEROSPACE USA, INC. PORT HADLOCK, WA	
CHECKED	APPROVED	DRAWING NO. D3582	REV. A SHEET 1 OF 1
DATE 07.04.20	TITLE BK 117 SKIDTUBE ASSEMBLY	SCALE 1:20	

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PARTS LIST FOR D3582-041 SKIDTUBE ASSEMBLY

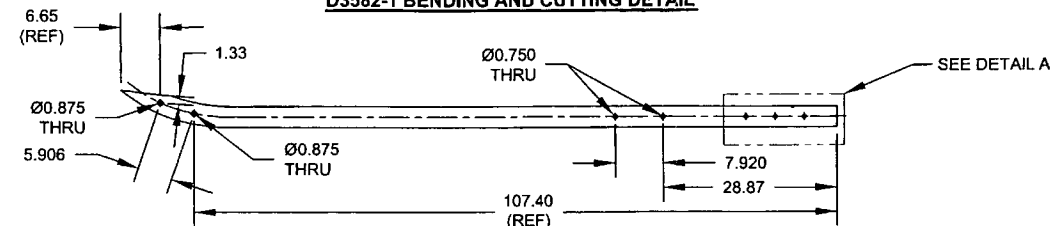
Qty	Part Number	Description
X	D3582-041	SKIDTUBE ASSEMBLY
1	D2962-150	EXTRUSION
1	D2964	CAP
1	D2965	CAP
1	D2971	CROSS BOLT SPACER
2	D2973	CROSS BOLT SPACER
2	D3492-049	PLUG ASSEMBLY
2	D3492-051	PLUG ASSEMBLY
6	D3492-053	PLUG ASSEMBLY
1	D3508-3	WEARPLATE
1	D3508-9	WEARPLATE
1	D3508-11	WEARPLATE
1	D3508-13	WEARPLATE
1	D3558-3	GASKET
1	D3558-9	GASKET
1	D3558-11	GASKET
1	D3558-13	GASKET
1	D3584-1	WEB
3	D3662-1	CROSS BOLT SPACER
3	D3662-3	CROSS BOLT SPACER
36	AELS-1032-130	INSERT
2	ALS7-428-165	INSERT
28	AN3C4A	BOLT
2	AN3-5A	BOLT
2	AN4-4A	BOLT
28	AN960C10L	WASHER
2	AN960JD10L	WASHER
2	AN960JD416L	WASHER

GENERAL NOTES:

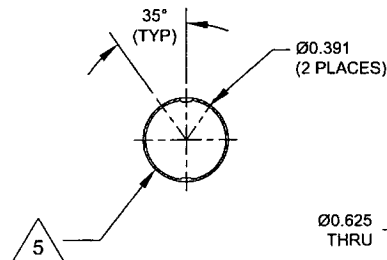
- ALL DIMENSIONS ARE IN INCHES
- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- WELDING TO BE DONE PER DART QSI 004.
- INSERT D3584-1 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015 AFTER BENDING.
- USE DART DRILL TEMPLATE DT8900 TO LOCATE AND DRILL Ø0.297 HOLES (36 PLACES) FOR WEARSHOE INSERTS. INSTALL AELS-1032-130 PER SECTION G-G (36 PLACES) AFTER FINISH. SEAL WEARPLATE BOLTS WITH SIKAFLEX-241/-291.
- DO NOT INSTALL AN3C4A BOLTS AND AN960C10L WASHERS IN INDICATED LOCATIONS.
- FINISH:
 - CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIOR TO INSERTING D3584-1 WEB.
 - POWDER COAT ASSEMBLY GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3.
 - ANTI-SKID PAINT AS INDICATED TO 1.00 ABOVE CENTER LINE PER DART QSI 005 4.4



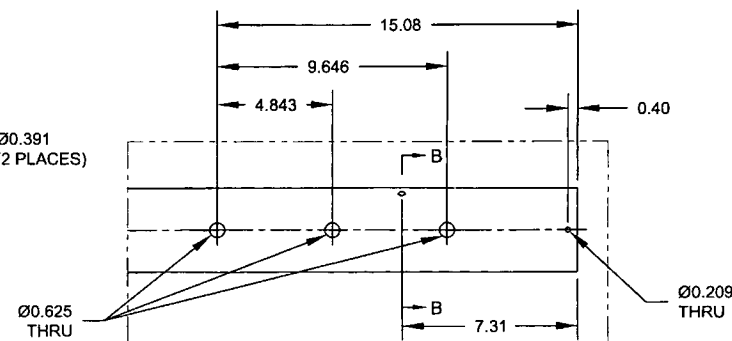
D3582-1 BENDING AND CUTTING DETAIL



D3582-1 DRILLING DETAIL



SECTION B-B
SCALE 1:5



DETAIL A
SCALE 1:5

RELEASED
07.11.22

A	NEW ISSUE	PH	07.06.08
REV.	DESCRIPTION		BY DATE
DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	PH	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.	DA	D3582	SHEET 1 OF 2
APPROVED	PH	TITLE	SCALE
DE APPR.	PH	BK 117 SKIDTUBE ASSEMBLY	1:2
DATE	07.06.08	COPYRIGHT © 2007 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

32910 BO 08.07.10

